AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions of claims in the application.

Listing of Claims:

1. (Currently Amended) A method of causing an improvement in function of the central nervous system of a subject having impaired central nervous system function resulting from a stroke, comprising

(a) preparing an aliquot of CD34+/-, Lin- cells ~~containing a predetermined target population by providing a starting sample of cells~~ derived from umbilical cord blood ~~, and causing cells of the target population in the starting sample to divide~~; and

(b) administering to the subject the aliquot of cells, in an amount sufficient to cause said improvement, wherein said aliquot of cells is administered directly to the site of said stroke.

2. (Currently Amended) A method of causing an improvement in a function of the central nervous system of a subject having impaired central nervous system function resulting from a stroke, comprising

(a) preparing an aliquot of CD34+/-, Lin- cells ~~containing stem cells by providing a starting sample of cells~~ derived from blood ~~, and causing stem cells in the starting sample to divide~~; and

(b) administering to the subject the aliquot of cells, in an amount sufficient

to cause said improvement, wherein said aliquot of cells is administered directly to the site of said stroke.

3. (Currently Amended) The method of claim 2, wherein said administering further comprises administering a growth factor to said subject ~~A method of causing an improvement in a function of the central nervous system of a subject, comprising administering to the subject an aliquot of cells derived from blood and a growth factor~~.

4. (Original) The method of claim 2 or 3 wherein the cells are derived from umbilical cord blood.

5. (Original) The method of claim2 or 3 wherein the cells are derived from peripheral blood.

6. (Original) The method of claim 1, 2 or 3 further comprising obtaining the aliquot of cells by separating a desired cell population from the cord blood.

7. (Original) The method of claim 3 wherein the growth factor is selected from the group consisting of oncostatin M and growth factors from the following families: FGF, neurotrophin, IGF, CNTF, EGF, TGF-beta, LIF, interleukins, PDGF and VEGF.

8. (Original) The method of claim 1, 2 or 3 further comprising obtaining a sample of

cells and purifying the sample to obtain the aliquot.

9. (Original) The method of claim 1, 2 or 3 further comprising obtaining a sample of cells and expanding at least a selected population of cells in the sample *ex vivo* to obtain the aliquot.

10. (Original) The method of claim 1, 2 or 3 wherein said aliquot of cells comprises allogeneic cells.

11. (Original) The method of claim 1, 2 or 3 wherein said aliquot of cells comprises autologous cells.

12. (Withdrawn) The method of claim 1, 2, or 3 wherein the improvement results in recovery from a central nervous system trauma.

13. (Original) The method of claim 1, 2 or 3 wherein said the improvement results in repair of central nervous system damage

14. (Original) The method of claim 1, 2 or 3 wherein said the improvement results in repair of central nervous system disease.

15. (Original) The method of claim 1, 2 or 3 wherein said the improvement results in

regeneration of central nervous system tissue.

16. (Original) The method of claim 1, 2 or 3 wherein said the improvement comprises measurable stroke recovery.

17. (Original) The method of claim 1, 2 or 3 wherein the improvement is the result of stroke repair.

18. (Cancelled)

19. (Original) The method of claim 1, 2 or 3 wherein the improvement results from a genetic element contained in the administered cells.

20. (Original) The method of claim 19 wherein the genetic element is endogenous to the administered cells.

21. (Original) The method of claim 19 wherein the genetic element has been exogenously added to the administered cells.

22. (Withdrawn) The method of claim 1, 2 or 3 wherein the improvement comprises head trauma recovery.

23. (Withdrawn) The method of claim 1, 2 or 3 wherein the improvement comprises head trauma repair.

24. (Withdrawn) The method of claim 1, 2 or 3 wherein the improvement results from tissue regeneration after head trauma.

25. (Original) The method of claim 1 or 2 wherein the cells are administered intercerebrally, intracisternally, intracerebroventricularly, or intraparenchymally.

26. (Cancelled)

27. (Currently Amended) The method of claim 1 ~~26~~ wherein the cells are characterized as: $CD2^-$, $CD3^-$, $CD14^-$, $CD16^-$, $CD19^-$, $CD24^-$, $CD56^-$, $CD66b^-$, glycophorin A^-, flk-1^+, $CD45^+$, $CXCR4^+$, MDR^+.

28. (Cancelled)

29. (Original) The method of claim 1, 2 or 3 further comprising administering to the subject a cell differentiation factor.

30. (Original) The method of claim 1, 2 or 3 further comprising administering to the subject a neural guidance molecule.

31. (Original) The method of claim 3 wherein the growth factor is administered intercerebrally, intracisternally, intracerebroventricularly, or intraparenchymally.

32. (Original) The method of claim 3 wherein the growth factor is administered with the aliquot of cells.

33. (Original) The method of claim 3 wherein the growth factor is administered separately from the aliquot of cells.

34. (Cancelled)

35. (Original) The method of claim 13 wherein the damage is due to lack of oxygen to the brain.

36. (Cancelled)

37. (Currently Amended) A method of causing an improvement in central nervous system function of a patient comprising:

obtaining an aliquot containing a predetermined target population of cells by

(a) introducing a starting sample of cord blood cells into a growth medium;

(b) causing said cord blood cells to divide; ~~and~~

(c) concurrently with, intermittently during, or following step (b), contacting the cord blood cells in the growth medium with a selection element comprising a plurability of selective binding molecules with affinity for cord blood cells or a first population of non-target cells so as to select cells of the target population from other cells in the growth medium; and

(d) administering the aliquot to the patient in an amount sufficient to cause said improvement.

38-40 (Cancelled)

41. (Original) The method of claim 37 wherein said expansion is clonogenic.

42. (Withdrawn) A method of causing an improvement in function of the central nervous system of a subject having impaired central nervous system function, comprising administering to the subject an aliquot of cells derived from umbilical cord blood, wherein the improvement results from treatment of a disease selected from the group consisting of Parkinson's Disease, Alzheimer's disease, Huntington's Disease, MS, Tay-Sachs, and cerebral palsy.

43. (Withdrawn) A method of causing an improvement in function of the central nervous system of a subject having impaired central nervous system function, comprising administering to the subject an aliquot of cells derived from blood, the aliquot containing stem

cells, wherein the improvement results from treatment of a disease selected from the group consisting of Parkinson's Disease, Alzheimer's disease, Huntington's Disease, MS, Tay-Sachs, and cerebral palsy.

44. (Currently Amended) A method of causing an improvement in function of the central nervous system of a subject having impaired central nervous system function resulting from a stroke, said method comprising

(a) preparing an aliquot of cells containing a predetermined target population by providing a starting sample of cells derived from umbilical cord blood, and causing cells of the target population in the starting sample to divide; and

(b) administering to the subject the aliquot of cells, in an amount sufficient to cause said improvement, wherein said cells <u>are administered directly to the site of said stroke and</u> comprise CD34+/-, Lin- cells.

45-47 (Cancelled)